



(19)

(11) Publication number: 200

Generated Document.

**PATENT ABSTRACTS OF JAPAN**

(21) Application number: 2000371334

(51) Int'l. Cl.: G11B 5/31

(22) Application date: 06.12.00

(30) Priority:

(43) Date of application  
publication: 21.06.02(84) Designated contracting  
states:

(71) Applicant: HITACHI LTD

(72) Inventor: YANAGISAWA YASUNG  
MIYAMOTO NORIFUMI  
MORINAGA SATOSHI  
KATAOKA KOJI

(74) Representative:

**(54) THIN FILM MAGNETIC  
HEAD AND  
MANUFACTURING  
METHOD THEREOF, AND  
MAGNETIC DISK UNIT**

(57) Abstract:

**PROBLEM TO BE SOLVED:** To provide a composite magnetic head with satisfied reproducibility having the fine recording track width without being restricted in the resolving dimension of photo-lithographic technology.

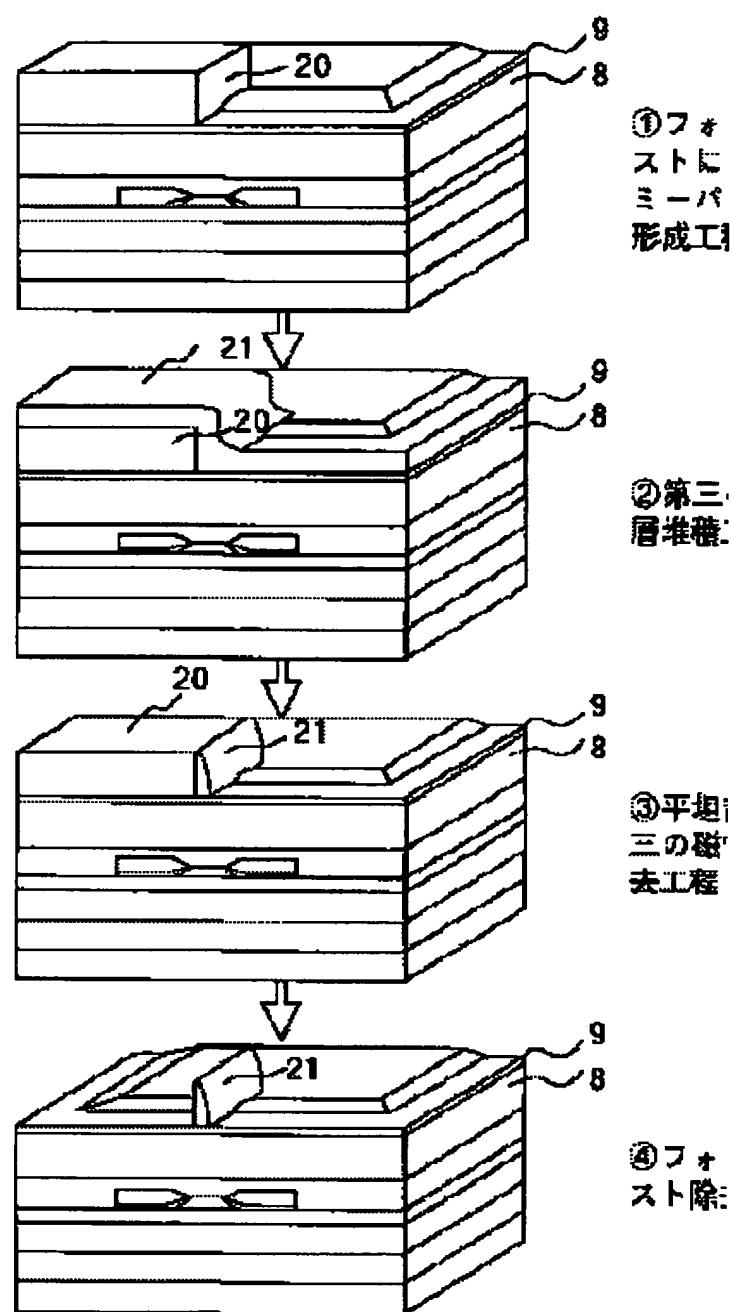
**SOLUTION:** In the process to form a pole part of a recording head, a dummy pattern is formed by using the material such as photoresist so that the end of the pattern is positioned at the position for forming the pole part, and a soft magnetic material becoming the pole is formed to the film on the side surface of this dummy pattern by using a method such as a gradient sputtering. After that, the soft magnetic material only

Best Available Copy

of the flat part is removed by an etching method having the anisotropy such as an ion milling so as to leave the soft magnetic material on the side surface of the dummy pattern. Consecutively, the pole part of a writing head is formed by removing the dummy pattern. By the above method, the writing track is determined by the film thickness of a magnetic film forming the pole part of the recording head, independently of the resolving minimum dimension of the photo-lithography of a long wavelength light source.

COPYRIGHT: (C)2002,JPO

図 1



Best Available Copy